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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,603	11/25/2003	Bernard O. Geaghan	59080US002	5621

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3M INNOVATIVE PROPERTIES COMPANY  
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EXAMINER
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NGUYEN, JIMMY H

ART UNIT	PAPER NUMBER
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2629

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	02/23/2007	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 02/23/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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**Office Action Summary**

Application No.

10/721,603

Applicant(s)

GEAGHAN ET AL.

Examiner

Jimmy H. Nguyen

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) 19-35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. This Office Action is made in response to applicant's RESPONSE TO ELECTION REQUIREMENT AND AMENDMENT, filed on 01/02/2007.
2. Applicant's election without traverse of Group I (claims 1-18) in the reply filed on 01/02/2007 is acknowledged.
3. Claims 19-35 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Group II, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 01/02/2007. Claims 1-18 are considered as follows:

#### *Information Disclosure Statement*

4. The information disclosure statement filed 11/07/2006 has been placed in the application file, but the cited references are crossed out because these references were previously cited in IDS filed on 10/27/2006 and considered by Examiner.

#### *Claim Rejections - 35 USC § 112*

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
6. Claims 1-18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As to claims 1-18, independent claim 1 recites a feature, “the light beam having a property that abruptly changes when the tip of the stylus sufficiently contacts the input surface” in lines 3-5, which was not described in the specification in such a way as to enable one skilled in the art to understand how the light beam itself can change its property. The disclosure, specifically Fig. 2C and the description, page 9, last paragraph, expressly teaches that a cylinder 246 is movable in and out of the stylus to change the light beam from a light beam B’ to a collimated light beam B. Accordingly, these claims contain the above underlined feature which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Additionally to claim 3, this claim recites a feature, “the abrupt change is a change in beam intensity” in line 1, which was not described in the specification in such a way as to enable one skilled in the art to understand how the light beam can change the beam intensity and which element(s) of the stylus can cause a change in the beam intensity. The disclosure, specifically Fig. 2C and the description, page 9, last paragraph, expressly teaches that a cylinder 246 is movable in and out of the stylus to change the light beam from a light beam B’ to a collimated light beam B. Accordingly, this claim contains the above underlined feature which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Additionally to claim 4, this claim recites a feature, “the abrupt change is a change in beam wavelength”, which was not described in the specification in such a way as to enable one skilled in the art to understand how the light beam can change the beam wavelength and which element(s) of the stylus can cause a change in the beam wavelength. The disclosure, specifically

Art Unit: 2629

Fig. 2C and the description, page 9, last paragraph, expressly teaches that a cylinder 246 is movable in and out of the stylus to change the light beam from a light beam B' to a collimated light beam B. Accordingly, this claim contains the above underlined feature which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Additionally to claim 5, this claim recites a feature, "the abrupt change is a change in beam modulation", which was not described in the specification in such a way as to enable one skilled in the art to understand how the light beam can change the beam modulation and which element(s) of the stylus can cause a change in the beam modulation. The disclosure, specifically Fig. 2C and the description, page 9, last paragraph, expressly teaches that a cylinder 246 is movable in and out of the stylus to change the light beam from a light beam B' to a collimated light beam B. Accordingly, this claim contains the above underlined feature which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Additionally to claim 6, this claim recites a feature, "the abrupt change is a change in frequency modulation", which was not described in the specification in such a way as to enable one skilled in the art to understand how the light beam can change the frequency modulation and which element(s) of the stylus can cause a change in the frequency modulation. The disclosure, specifically Fig. 2C and the description, page 9, last paragraph, expressly teaches that a cylinder 246 is movable in and out of the stylus to change the light beam from a light beam B' to a collimated light beam B. Accordingly, this claim contains the above underlined feature which

Art Unit: 2629

was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Additionally to claim 7, this claim recites a feature, "the abrupt change is a change in duty cycle of the modulation", which was not described in the specification in such a way as to enable one skilled in the art to understand how the light beam can change the duty cycle of the modulation and which element(s) of the stylus can cause a change in the duty cycle of the modulation. The disclosure, specifically Fig. 2C and the description, page 9, last paragraph, expressly teaches that a cylinder 246 is movable in and out of the stylus to change the light beam from a light beam B' to a collimated light beam B. Accordingly, this claim contains the above underlined feature which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Additionally to claim 8, this claim recites a feature, "the abrupt change is a change in pulse width of the modulation", which was not described in the specification in such a way as to enable one skilled in the art to understand how the light beam can change the pulse width of the modulation and which element(s) of the stylus can cause a change in the pulse width of the modulation. The disclosure, specifically Fig. 2C and the description, page 9, last paragraph, expressly teaches that a cylinder 246 is movable in and out of the stylus to change the light beam from a light beam B' to a collimated light beam B. Accordingly, this claim contains the above underlined feature which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Additionally to claim 9, this claim recites a feature, “the abrupt change is cross-sectional size of the beam”, which was not described in the specification in such a way as to enable one skilled in the art to understand how the light beam can change the cross-sectional size of the beam and which element(s) of the stylus can cause a change in the cross-sectional size of the beam. The disclosure, specifically Fig. 2C and the description, page 9, last paragraph, expressly teaches that a cylinder 246 is movable in and out of the stylus to change the light beam from a light beam B’ to a collimated light beam B. Accordingly, this claim contains the above underlined feature which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Additionally to claim 10, this claim recites a feature, “the abrupt change is a change in polarization”, which was not described in the specification in such a way as to enable one skilled in the art to understand how the light beam can change the beam wavelength and which element(s) of the stylus can cause a change in the beam wavelength. The disclosure, specifically Fig. 2C and the description, page 9, last paragraph, expressly teaches that a cylinder 246 is movable in and out of the stylus to change the light beam from a light beam B’ to a collimated light beam B. Accordingly, this claim contains the above underlined feature which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Additionally to claim 13, this claim recites a feature, “the auxiliary switch causes the abrupt change in the light beam to simulate a condition where the tip contacts the input surface”, which was not described in the specification in such a way as to enable one skilled in

Art Unit: 2629

the art to understand what a condition is and how the auxiliary switch causes the abrupt change in the light beam to simulate a condition where the tip contacts the input surface. The disclosure, specifically the description, page 10, lines 1-3, expressly teaches that an auxiliary switch 320 for activating or changing properties of an emitted light beam **regardless of whether a tip switch is activated**. Accordingly, this claim contains the above underlined feature which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Additionally to claim 14, this claim recites a feature, "the auxiliary switch changes the beam intensity", which was not described in the specification in such a way as to enable one skilled in the art to understand how the auxiliary switch itself can change the beam intensity.

Additionally to claim 15, this claim recites a feature, "the auxiliary switch changes the beam modulation", which was not described in the specification in such a way as to enable one skilled in the art to understand how the auxiliary switch itself can change the beam modulation.

Additionally to claim 16, this claim recites a feature, "the auxiliary switch changes the beam wavelength", which was not described in the specification in such a way as to enable one skilled in the art to understand how the auxiliary switch itself can change the beam wavelength.

Additionally to claim 17, this claim recites a feature, "the auxiliary switch focuses the beam", which was not described in the specification in such a way as to enable one skilled in the art to understand how the auxiliary switch itself focuses the beam.

Additionally to claim 18, this claim recites a feature, "the auxiliary switch defocuses the beam", which was not described in the specification in such a way as to enable one skilled in the art to understand how the auxiliary switch itself can defocuses the beam.

Art Unit: 2629

7. It is noted Applicants that due to the rejection under 35 USC 112, first paragraph above, the following art rejections are based as best understood by the Examiner.

*Claim Rejections - 35 USC § 102*

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 2, 9, 11-13, 17 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Oikawa et al. (US 4,320,292), hereinafter Oikawa.

As to claims 1 and 9, Oikawa discloses a stylus (a light pen 10; see Fig. 3) for use with a light sensitive user input device, the stylus comprising a light-emitting device (light emitting diode LD; see Fig. 3) configured to emit a light beam through a tip (34) of the stylus when the tip is not in contact with an input surface of the input device, and the light beam is focussed (this inherently implies the cross-sectional size of the beam changed) when the tip of the stylus sufficiently contacts the input surface, the abrupt change in the light beam being detectable by the light sensitive user input device (see col. 6, lines 45-64).

As to claim 2, Oikawa teaches the stylus (10) comprising a switch (a reed switch S1; see Fig. 3) coupled to the tip (34) and configured to actuate the change of the light beam (see col. 6, lines 54-64).

As to claim 11, Oikawa teaches the stylus comprising a reed switch (S1) coupled to the tip (34) and configured to actuate the change of the light beam (see col. 6, lines 54-64) and a source switch (S2) for controlling the power supply from a battery (B) to the circuit board (32) to

Art Unit: 2629

drive the LED on and off, thereby controlling the light beam (see col. 6, line 52 through col. 7, line 4). Accordingly, either a reed switch (S1) or a source switch (S2) can correspond to the claimed auxiliary switch of claim 11.

As to claim 12, Oikawa teaches the source switch (S2) for controlling the power supply from a battery (B) to the circuit board (32) to drive the LED on and off, thereby controlling the light beam (see col. 6, line 65 through col. 7, line 4).

As to claim 13, Oikawa teaches either the switch (S1) or switch (S2) causing the light beam to simulate a condition where the tip contacts the input surface (see col. 6, line 65 through col. 7, line 4).

As to claims 17 and 18, Oikawa teaches the switch (S1) focusing when the tip of the stylus sufficiently contacts the input surface and defocusing when the tip of the stylus does not contacts the input surface (see col. 6, lines 45-64).

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 3-8, 10 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oikawa.

As to these claims, as discussed in the rejections under 35 USC 112, first paragraph above, because the Applicants do not describe the features of these claims so as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or

Art Unit: 2629

use the invention, Examiner assumes the features of claims 3-8, 10 and 14-16 are well-known to a person of ordinary skilled in the art. Accordingly, Oikawa discloses all the claimed limitations of these claims except that Oikawa does not expressly teach that the switch (S1) can cause the change in beam intensity of claims 3 and 14, the change in beam wavelength of claims 4 and 16, the change in beam modulation of claims 5 and 15, the change in frequency modulation of claim 6, the change in duty cycle of the modulation of claim 7, or the change in pulse width of the modulation of claim 8. Official Notice is taken that both the concept and the advantages of using a switch to cause a change in beam intensity, in beam wavelength, in beam modulation, in frequency modulation, in duty cycle of the modulation, or in pulse width of the modulation are well-known and expected in the art. It would have been obvious to modify the switch of Oikawa to cause a change in beam intensity, in beam wavelength, in beam modulation, in frequency modulation, in duty cycle of the modulation, or in pulse width of the modulation, because this would provide a user additional function(s) for specific application(s), based on a change in beam intensity, in beam wavelength, in beam modulation, in frequency modulation, in duty cycle of the modulation, or in pulse width of the modulation.

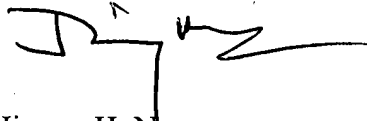
### ***Conclusion***

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy H. Nguyen whose telephone number is 571-272-7675. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached at 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JHN  
February 20, 2007



Jimmy H. Nguyen  
Primary Examiner  
Technology Division: 2629